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Lesson 3: Performance Indicators and Data Quality Standards

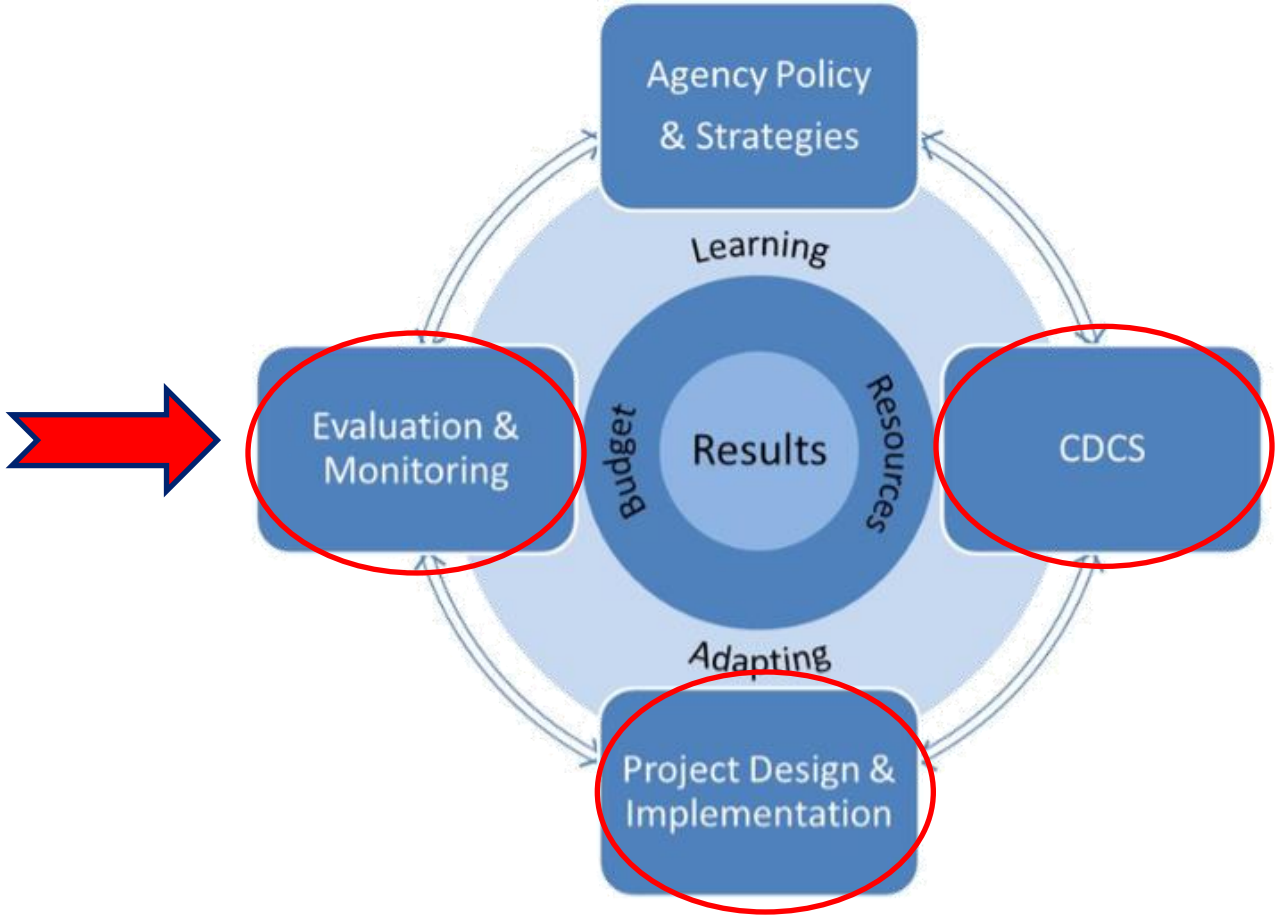
Objectives

1. Learn and be able to apply the criteria for good indicators

2. Understand the real life trade-offs related to choosing good indicators

3. Understand different types of indicators and how they are used

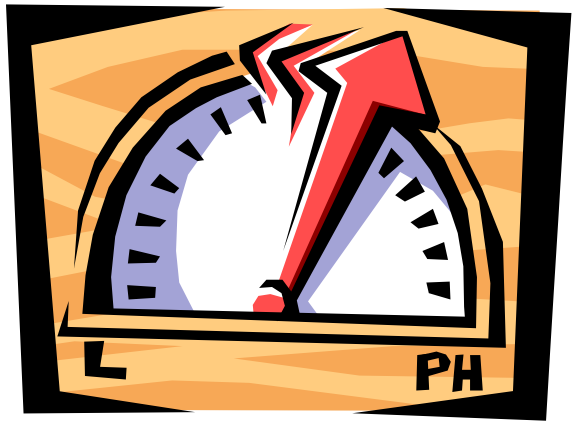
USAID Program Cycle



What is an Indicator?

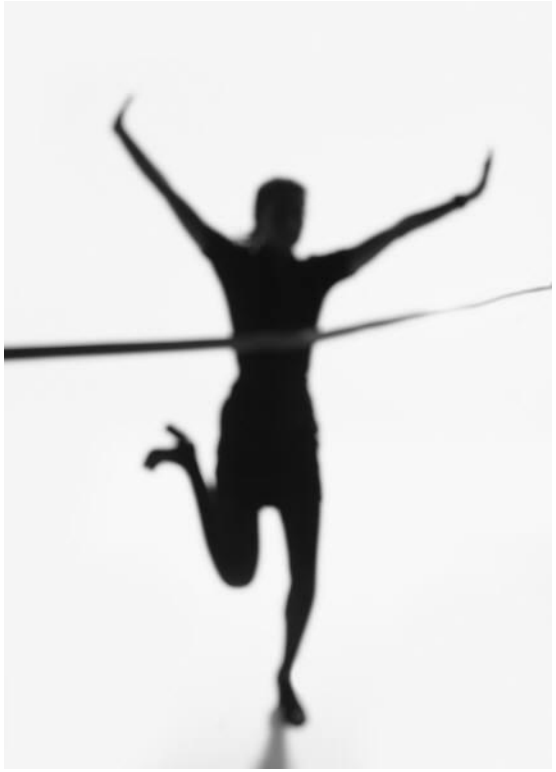
- An **observable or measurable** characteristic that shows, or "indicates," the **extent to which an intended result is being achieved**.

- A performance indicator answers the question- "how will we know achievement when we see it?"



Indicators

- Tell us how we will recognize success
- Provide objective performance data and facilitate evidence-based decision-making
- Provide clarity about what is to be achieved
- Orient & motivate staff and partners toward achieving results
- Help communicate results to stakeholders



Indicators Can't Tell You...

- What is causing a certain result
  - Poor results do not necessarily mean poor execution
  - Good results don't guarantee that everything is going well

Types of Indicators

1. Contextual Indicators:

- Provide picture of broader environment in which programs operate
- Rarely are used as performance indicators because they reflect change beyond your manageable interest

Example: Growth in (real) gross domestic product (GDP) per capita

Examples of Contextual Indicators in the Economic Growth Sector

Example of Indicators to monitor changes in country context include:

- **Prevalence of Poverty**: Percent of people living on less than $1.25/day
- **Expenditures of rural households**
- **Prevalence of stunted children under five**
- **Change in average score on Household Hunger index**

Types of Indicators

2. Standard Indicators:

- Facilitates aggregation and reporting on common indicators
- Often framed at the output level to allow for aggregation of data across countries and programs
- Or…. focused at a very high level
- Driven by what can be measured and compared across countries

Example: Number of Laws or Amendments to Ensure Credible Elections Adopted with USG Technical Assistance

Types of Indicators

3. Performance Indicators:

- Focus is on management value at the program and project level (e.g. what do front line managers need to know?)
- Must address criteria for strong indicators to ensure management value and effectiveness

Example: % of farmers adopting improved planting methods

Can an indicator be both a performance and standard indicator?

Examples of Standard Indicators for USAID Ethiopia

4.5-4*	Gross margin per unit of land, kilogram, or animal of selected product
4.5.2-7*	Number of individuals who have received USG supported short-term agricultural sector productivity or food security training
4.5.2-23	Value of incremental sales (collected at farm level) attributed to FTF implementation

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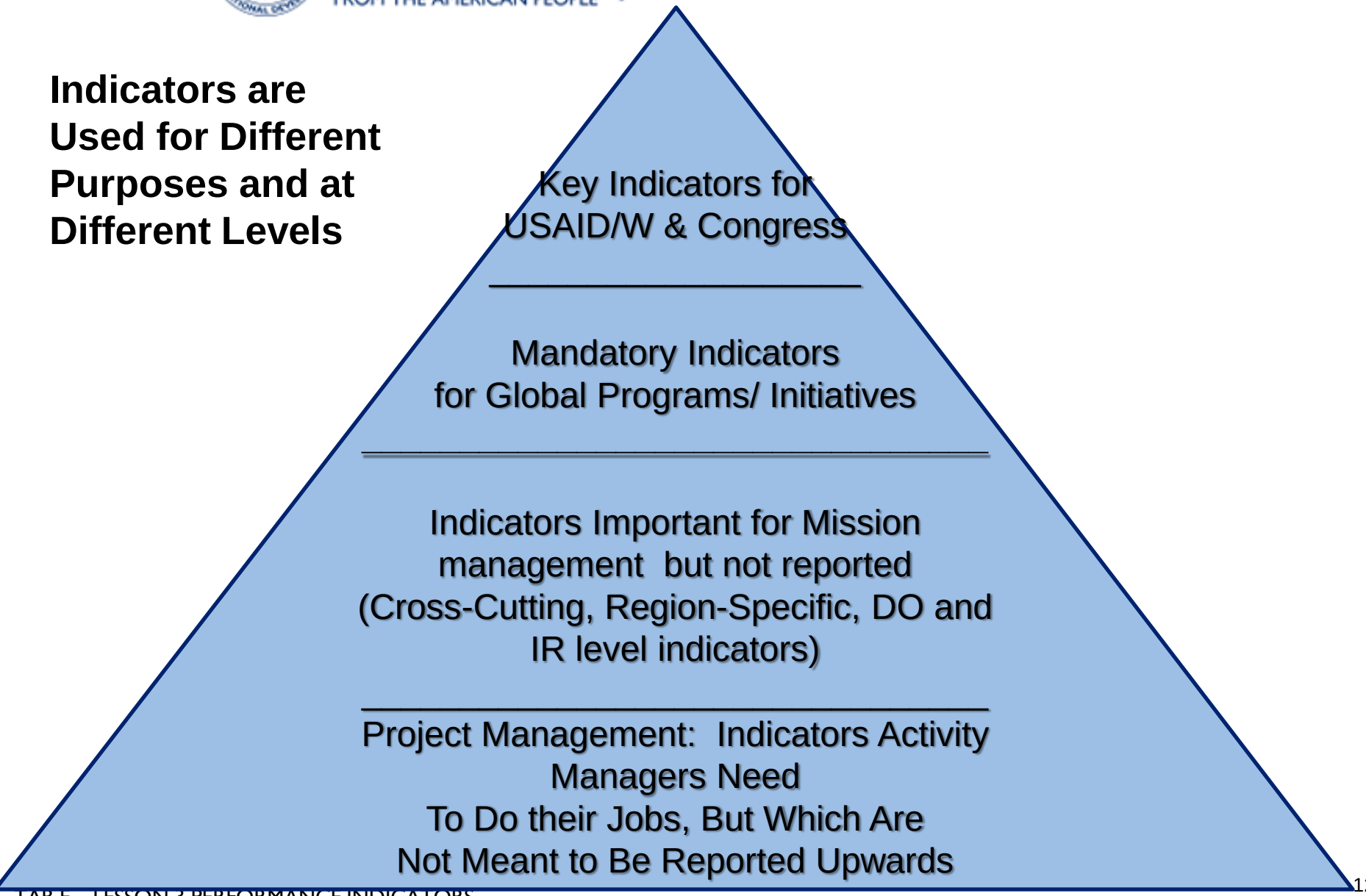
Indicators are Used for Different Purposes and at Different Levels

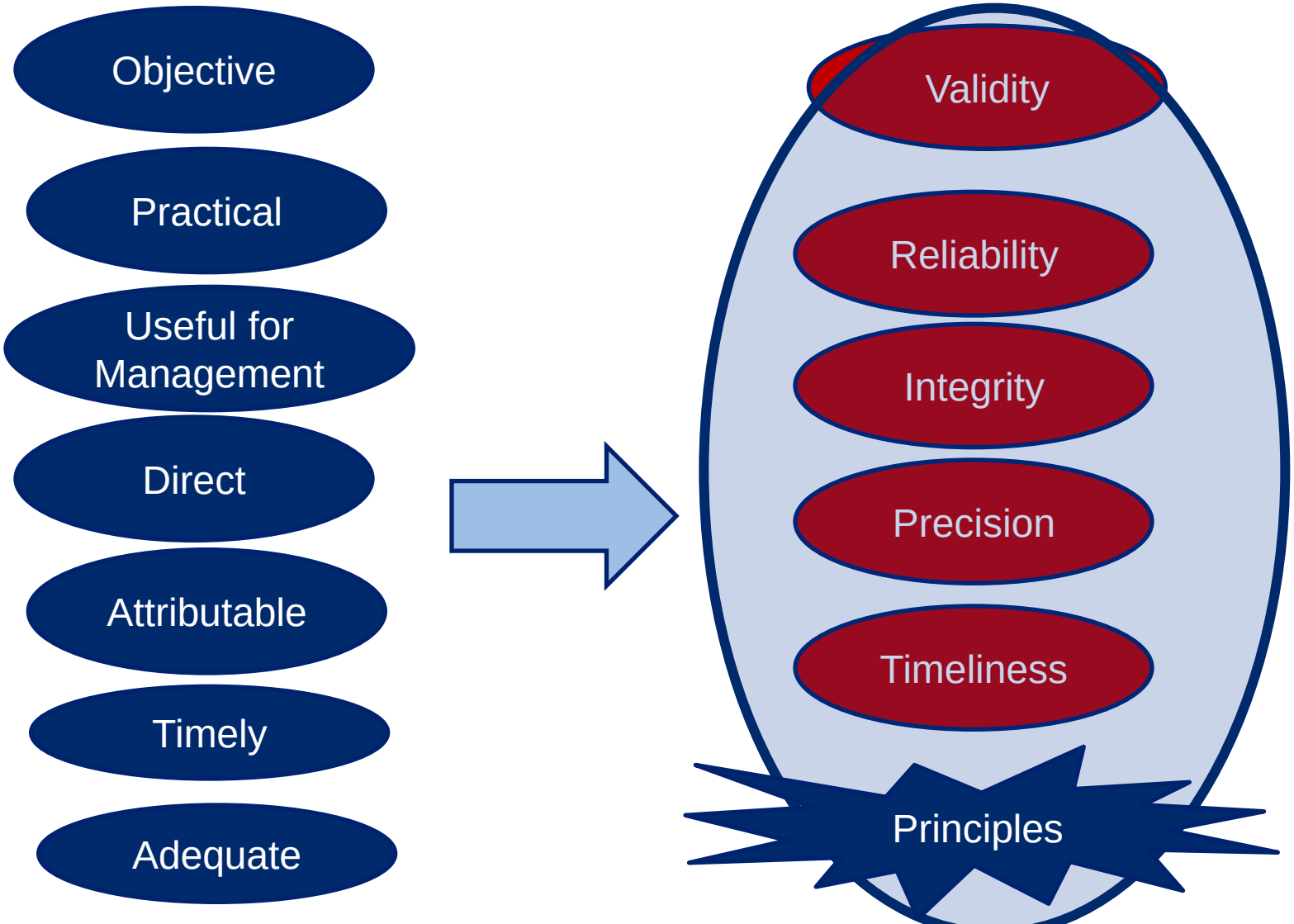


Selecting Indicators: USAID Criteria

USAID has shifted / consolidated its criteria……

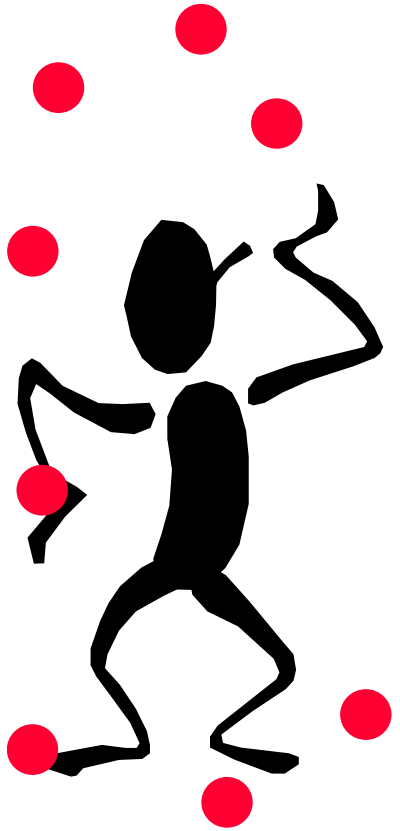
"When selecting indicators….ensure that the selected indicators will lead to performance monitoring data that meet the quality standards…" **(ADS 203.3.6)**

For USAID: A Crosswalk from Old to New Criteria



USAID's Data Quality Standards

- ✓ Validity
- ✓ Integrity
- ✓ Precision
- ✓ Reliability
- ✓ Timeliness



Validity

The extent to which an indicator and/or the resulting data actually represents what we intend to measure.

(1) Face Validity /Directness

(2) The scale of measurement (indicator) should be consistent with the scale of the intervention.

(3) Measurement Error

Validity

Direct Indicators

Some indicators that are indirect aim too high…

(1) Face Validity / Directness

Result: Increased use of improved teaching methods

Indicator: Literacy rates for primary school leavers

Validity

Direct Indicators

Some indicators that are indirect aim too low…

Result: Increased use of improved teaching methods

Indicator: Number of teachers trained

An Illustration…

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DO: Increased production in target zones

IR: Improved Use of Management Practices by farmers

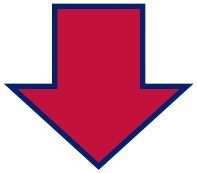
IR: Increased Knowledge & Awareness by Farmers of New Management Practices

Output: Farmers Trained

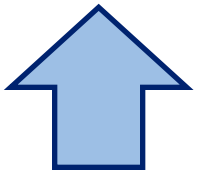
Direct Indicators

Real value of agricultural production in target zones

% of farm households in target region using a new technology



% of farmers who can identify a new technology



# of farmers trained

Which indicator is the most direct measure of the result?

Result: Expanded awareness by young people of community and civic issues

- Number of targeted youth who participate in community-focused life skills workshops
- % of targeted youth who are able to identify 3 or more critical issues for their local community
- Number of targeted youth who volunteer in community-based programs and activities Bureau by targeted youth

Validity

Which Indicator is a More Direct

Result:
More responsible reproductive behaviors of young people aged 15 to 24 years

↓

Indicators

#/% of young people in target areas with access to family planning services

#/% of young people in target areas who regularly use a modern method of contraception

BUT, what do you do when the most direct indicator isn't practical?

Use a Proxy Indicator…. a proxy is:

- Used when you can't collect data (because of expense, sensitivity, lack of timeliness)
- Related to the objective by one or more assumptions
- Based on convincing evidence that the assumption is valid

Proxy Indicator

Example

IR: Increased Access to Justice

Indicator: Total Number of New Courts Opened

Proxy Indicator

IR: More fair and impartial judicial system

Indicator: % population showing confidence in the judiciary in a national survey of citizen attitudes

Validity

(2) The scale of measurement (indicator) should be consistent with the scale of the intervention.

Validity

What about this indicator?

IR: **Increased economic opportunities in targeted regions**

Indicator: Rate of national unemployment

Validity

(3) Measurement Error- Results primarily from the poor design or management of **data collection processes**.

Examples: Leading questions, unrepresentative sampling, or inadequate training of data collectors

How is measurement error different from directness?

Validity

Measurement Error– 2 Types

A. **Sampling/ Selection** (or Representativeness)

Data are representative if they *accurately reflect the population they are intended to describe*

Result: Improved Performance of Learners in Uganda

Indicator: Primary School Completion Rate

Data: Data is derived from 100 schools in the capital.

Validity

Measurement Error– 2 Types

B. Non Sampling Error- refers to the poor design or problematic administration of the data collection instrument.

Examples: Poorly trained or partisan enumerators, or the use of questions that elicit incomplete or untruthful answers from respondents.

Validity – Watch out for Bias!

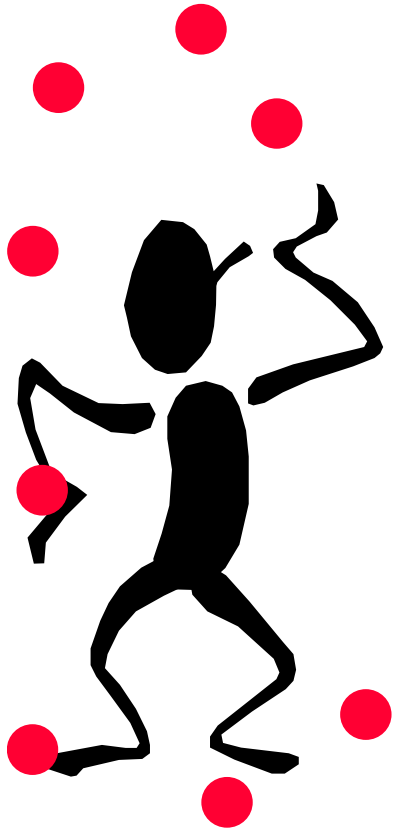
Non-sampling Error

Examples of bias include:

- Interviewer bias
- Instrument or measurement bias
- Response bias
- Recall bias
- Time or seasonal bias

USAID's Data Quality Standards

- ✓ Validity
- ✓ Integrity
- ✓ Precision
- ✓ Reliability
- ✓ Timeliness



Integrity

Integrity focuses on whether there are errors or improper manipulation of data.

Two common problems– transcription error and manipulation.

- Data should be reported through an established mechanisms in place to reduce the possibility that they are intentionally manipulated for political or personal reasons.

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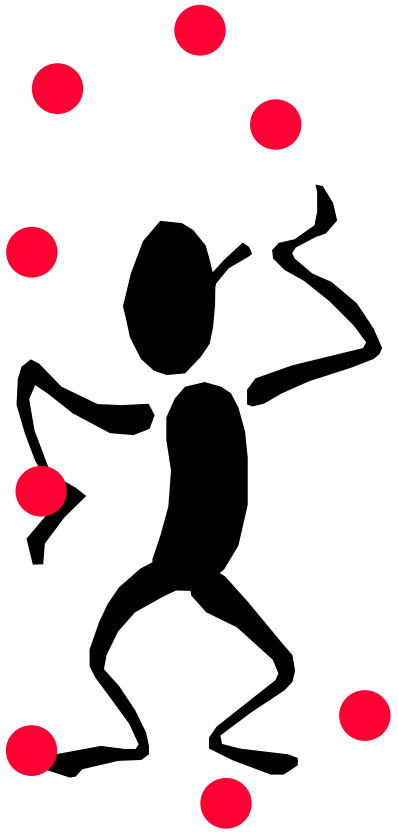

Precision

Precise indicators / data have a sufficient level of detail and are sensitive enough to present a fair picture of performance.

	2000	2003
# of laws adopted that are supported by the USG	1	3

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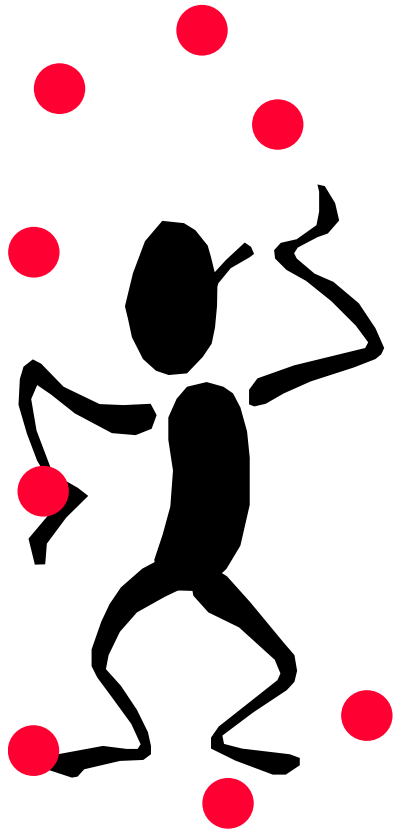


Reliability

Data should reflect stable and consistent data collection processes and analysis methods over time.

There are 3 key dimensions:

(1) Objectivity of the Indicator

(2) Reliability of the Instrument

(3) The reliability of the measurement processes

Reliability

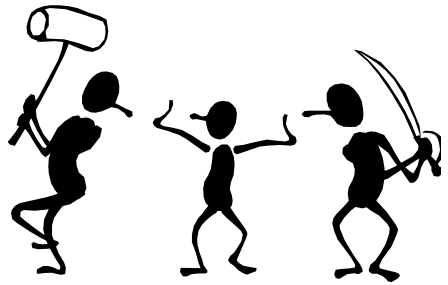
(1) Objectivity of the Indicator

An indicator is objective if it is unambiguous about 1) what is being measured and 2) what data are being collected.

In other words, a proponent and a skeptic would agree on how to measure the objective

Precision → Objectivity → Comparability of data over time

Comparability permits a useful assessment of performance over time.

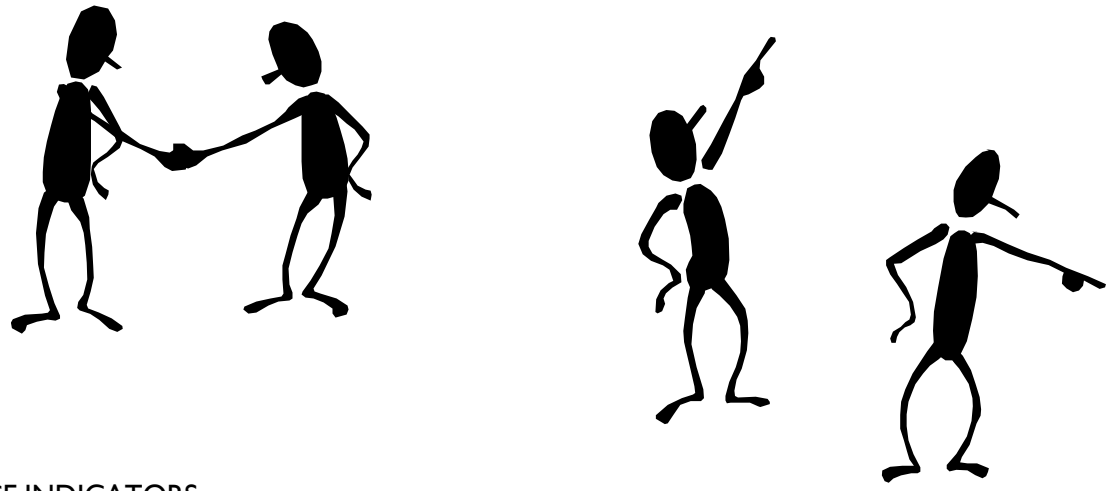


Reliability

Is this a good example?

Indicator: Number of successful firms

Better Example: Number of firms with an annual increase in revenues of at least 5%



Reliability

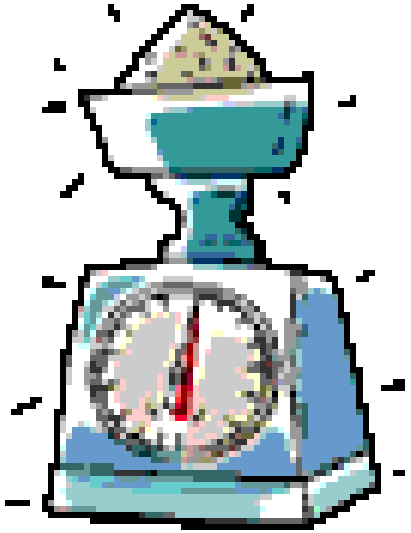
IR: Employment opportunities for targeted sectors expanded

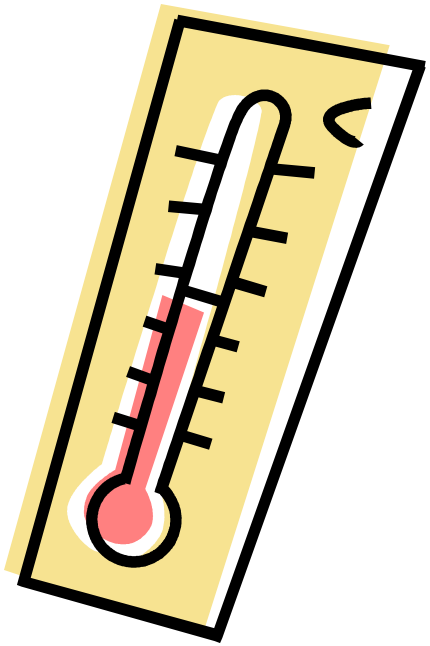
Indicator: Number of people employed by USAID assisted enterprises

Reliability

(2) Reliability of the Instrument

Focuses on whether the same result is obtained from using the method on repeated occasions (or consistency in measurement).





Reliability

(3) Reliability of measurement

Sampling and non-sampling error impacts validity (as discussed earlier) but it also affects reliability. These types of errors or mistakes means that data won't be comparable over time.

Example: A biased interviewer affects your ability to collect comparable data over time (this is non-sampling error).

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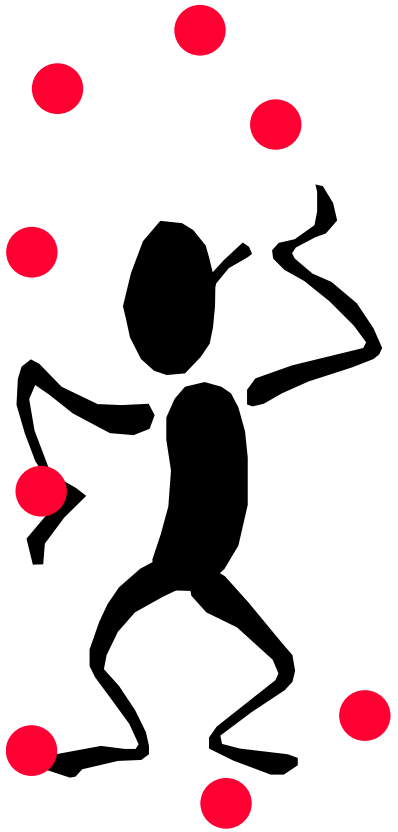


Timeliness

Data should be timely enough to influence management decision-making. Common issues are: ***frequency and currency.***

IR: Use of modern contraceptives by targeted population increased

Indicator: Number of married women of reproductive age reporting using modern contraceptives (CPR)

Source: DHS

Quantitative and Qualitative Indicators

Use indicators that best measure the results of your programs.

Quantitative Indicators - based on mathematical quantities

Example: A person's height or weight.

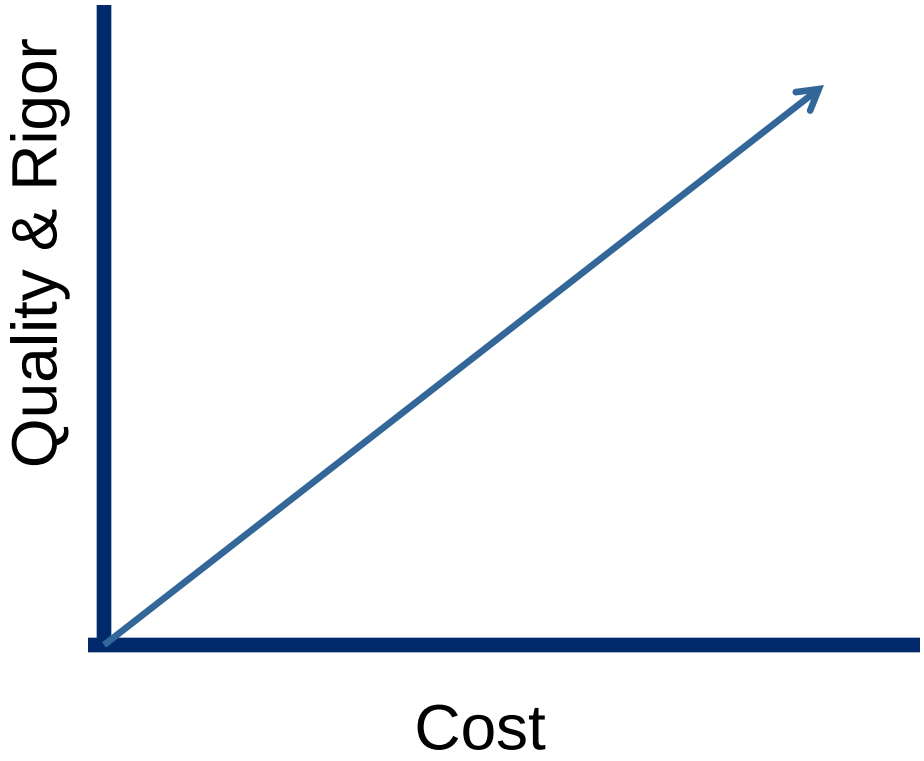
Qualitative Indicators - require subjective evaluation; they are **sometimes reported in numerical form**, but those numbers do not have arithmetic meaning on their own

Example: A score on an institutional capacity index or progress along a milestone scale.

Quantitative or Qualitative Indicators?

- Rating scale – people score something 1-5
- Milestone scale – progress along a series of steps
- Index – several pieces of data combined into one overall score (NGO capacity)
- Scorecard – count different aspects (health clinic services)

The Principle of Practicality -- Key Trade-Offs



The Principle of Adequacy

Taken as a group, the indicator and its companion indicators should be sufficient to measure the stated result.

How many indicators?

- Related to the complexity of the result
- The minimal number required to measure the result
  - Too many indicators results in information overload
  - Too few indicators could be misleading

Adequate

Example

Result: Strengthen the capacity of Saharana's independent agencies and civil society to promote open, accountable and efficient government; to fight corruption and poor administrative practices, and to generate public demand for and participation in good governance (actual example)

Indicators: ????????

Result: Increased Awards to Local Organizations

Indicator: The number of awards to local organizations

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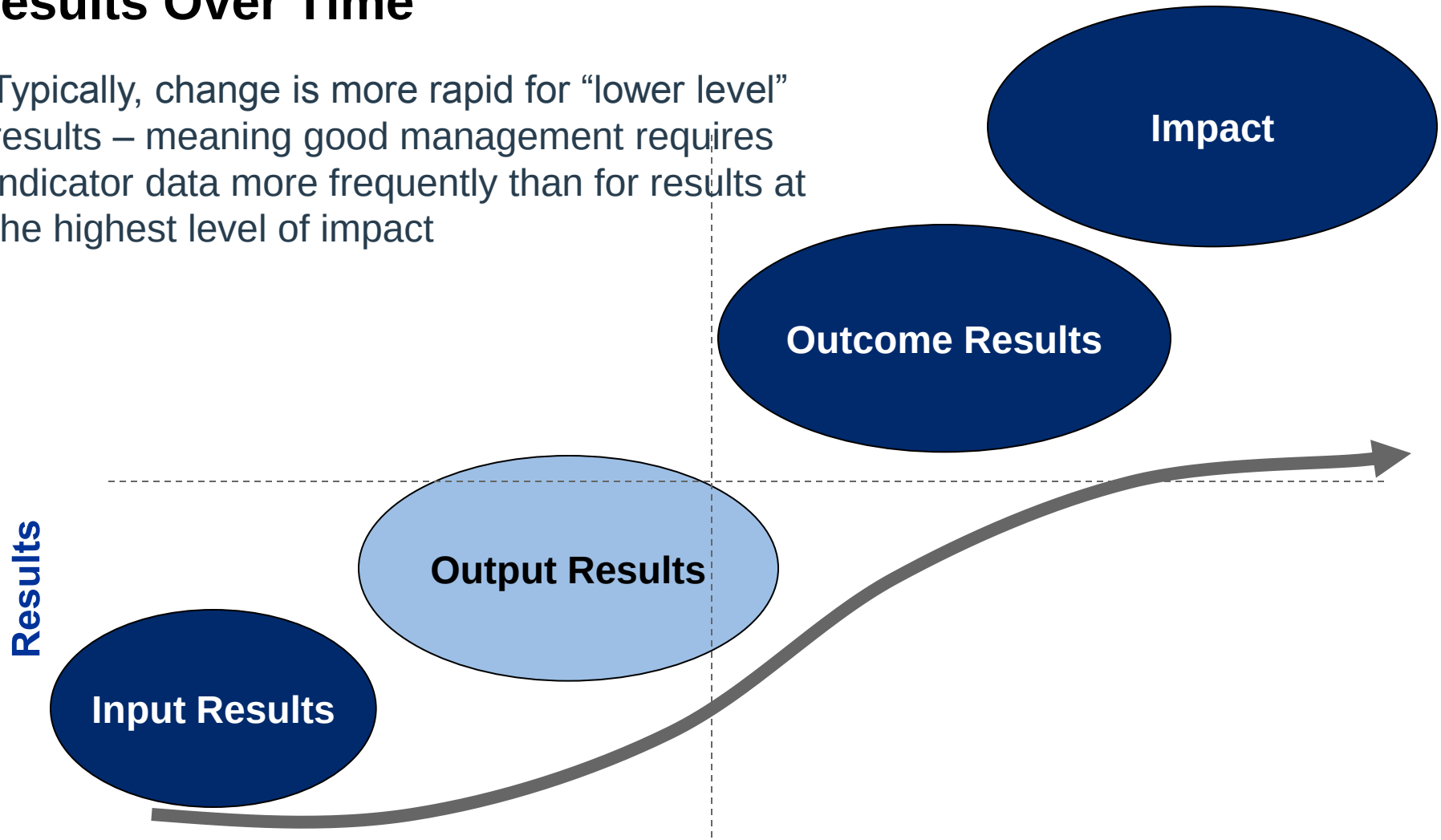
Your Turn…
Let's Do a Table Top Exercise

Results Over Time

Typically, change is more rapid for "lower level" results – meaning good management requires indicator data more frequently than for results at the highest level of impact



Disaggregation of Indicators

- WHY disaggregate?

- Types of disaggregation could include:
  - Sex
  - Age
  - Household size
  - Geographic location

CONSIDER: It takes resources and you have to be able to analyze disaggregated data-- do you need all this information for program management?

Reflecting Gender Issues —The Requirement

ADS 203.3.8

- **Performance management plans** must include gender sensitive indicators and sex-disaggregated data.
- All **people-level indicators** in the CDCS, project, or activity level MUST be sex-disaggregated.
- **Policy data** to track progress toward **gender equality and female empowerment** can be collected through studies of project beneficiaries (using qualitative & quantitative methodologies).

Gender – Beyond M&E

- It's not just about disaggregation of data
- Starts with good strategy and project design. How does gender impact the achievement of results?

Sample Result Related to Food Security:

Reduce the gap between female and male farmers' **access to productive inputs and services (credit, seeds, new technology, and agricultural extension)**.